

The California Broadband Council (CBC) met on Wednesday, April 5, 2017 at 1:30 p.m. in the Legislative Office Building, Room 100, Sacramento, CA.

Agenda Item 1 – Roll Call

A quorum was met to begin the meeting.

The following members or designees were in attendance:

Amy Tong, Director, California Department of Technology (CDT)

Senator Ben Hueso, California State Senate

Carla Peterman, Commissioner, California Public Utilities Commission (PUC)

Sunne Wright-McPeak, President, California Emerging Technology Fund (CETF)

Ben De Alba, Asst. Secretary, CA State Transportation Agency (CalSTA) (for Secretary Brian Kelly)

Mitch Medigovich, Dep. Director, CA Office of Emergency Services (CalOES) (for Dir. Mark Ghilarducci)

Jay Jefferson, Legislative Director, Office of Assemblymember Mike Gipson (for Asm. Mike Gipson)

Jerry Winkler, Director, California Department of Education (for Superintendent Tom Torlakson)

Brent Jamison, Deputy Director, Department of General Services (for Director Daniel Kim)

Agenda Item 2 – Opening Remarks

Chair Amy Tong convened the meeting delivering opening remarks. The Chair spoke of the importance of the CBC in advocating for more robust statewide broadband infrastructure deployment given the many benefits broadband internet provides, from workforce benefits, to emergency response, and eliminating the digital divide.

The Chair also spoke about progress made in California, including the Governor’s enactment of AB 1549 (Wood) last fall, and the CDT’s provision of managed broadband internet service through CALNET Category 5, which will be available soon.

Commissioner Carla Peterman was welcomed to her first meeting of the CBC.

Agenda Item 3 – Update on Transportation Agency Broadband Efforts (CalSTA)

Ben De Alba, Assistant Secretary for Rail and Ports at CalSTA discussed that his agency is working on the implementation of AB 1549 (Wood), Statutes of 2016, which requires the California Department of Transportation (Caltrans) to work with broadband providers and others to lay conduit during certain highway construction projects.

Chris Schmidt, Division Chief of Transportation Planning for Caltrans, discussed that Caltrans held a stakeholder meeting on April 4, 2017 to discuss how the department can engage Internet Service Providers (ISP) and when. Ideas were discussed on how to work effectively. The group will reconvene soon to discuss possible solutions.

Sunne Wright-McPeak asked Caltrans how it envisions working in strategic corridors given that not everyone is going to respond to Caltrans during the time that Caltrans is taking inquiries of interest. Mr.

Schmidt said the department needs to figure this out, inclusive of mapping corridors in unserved and underserved communities, and relying on partners. Ms. Wright-McPeak suggested a schedule and meeting frequency be set, and hoped to hear the report of a milestone at the next CBC meeting.

Commissioner Peterman offered to provide information to Caltrans that may be helpful to this discussion.

Agenda Item 4 – Presentation: The Correlation Between Broadband and Economic Productivity: Recent Findings (Center for Broadband Policy and Digital Literacy, UC Riverside)

Lloyd Levine, President of Filament Strategies, and Co-Founder of the Center for Broadband Policy and Digital Literacy, presented on the correlation between broadband and economic productivity. Mr. Levine noted the digital divide is a term that does not have a standard definition. He approached the term as being a ten percentage or more decrease, as compared to the population average, in a person's skillset to maneuver an electronic device, or to have access to an internet speed deemed acceptable by the government, or to possession of a device that is suitable for needs. The needs could be myriad, including having a device to look for employment.

Drawing parallels to various mass infrastructure projects over the centuries, such as canals, railroads, electricity, plumbing and solar power, Mr. Levine mentioned that investing in broadband infrastructure has yielded economic benefits. Further, he stated public funding has played a key role in bringing about the economic benefits from this infrastructure. Citing a 2016 report that took data from 1996-2012, established that a one percentage increase in broadband connectivity resulted in a large increase in California's gross domestic product.

One of this policy recommendations was to institutionalize broadband adoption programs, which would require outreach to connect low income households to high-speed internet service, as well as free or low-cost computing classes.

Agenda Item 5 – Presentation: Trends in Technology: 5G, the Future of Mobile Networks, and California's Digital Divide (Joint Venture Silicon Valley)

David Witkowski, Executive Director of the Wireless Communications Initiative, Joint Venture Silicon Valley, presented on "5G- Promises & Challenges." Mr. Witkowski discussed the 8 key metrics that define 5G technology. Major promises of 5G include a faster internet, energy efficiency, less need for more spectrum, and more user density. Challenges of 5G include site aesthetics, public resistance, funding, deployment issues, and some municipal issues.

While 5G is expected to ratify in 2020, this technology will most likely peak by 2032. However, 4G will still dominate for a long time. However, some California areas may never get 5G.

Given case and legal studies in Ohio and Arizona that involved local control disputes, Mr. Witkowski asked whether it would be a matter of good policy for California to establish regional authorities in order to standardize rates and other matters. Similar to the structure of regional air quality control boards that presently exist throughout the state.

Agenda Item 6A – The Internet of Things (Verizon)

Ross Shapiro, Director of Public Sector, State, Local Government and Education, at Verizon issued an industry response on 5G technology. Mr. Shapiro mentioned that earlier this year, Verizon announced it would begin test trials of 5G technology in 11 cities across the nation, which included Sacramento.

The number of things, or smart devices, that are connected to the internet is growing rapidly each year. In 2014, there were 9.7 billion endpoint connections. In 2020, it is projected there will be 30 billion endpoint connections. These will include cars, street lights, video surveillance, utility meters, doors, appliances, emergency services and car breathalyzers. These connected Internet of Things (IoT) are expected to bring about smart cities, energy efficiency, agricultural technology and intelligent transportation.

Agenda Item 6B – The Internet of Things (AT&T)

Bruce Johnston, Business Development Lead for AT&T IoT Smart Home Initiatives and Mark Roese, Area Vice President of Sales at AT&T Government and Education Solutions, issued an industry response for AT&T. Mr. Johnston defined IoT as “a network of everyday devices, appliances, and other items equipped with computer chips and sensors that can collect and transmit data through the internet.” By 2020, the IDC estimates there will be 35 billion connected devices- which would be a number four times greater than the human population is projected to be at that time.

Mr. Johnston discussed that in California, the IoT has impacted Caltrans in various ways, from traffic monitoring, changeable traffic message signs, and irrigation. Impacts also may be seen in the Department of Water Resources, the California Highway Patrol and the Air Resources Board.

AT&T discussed a multi-network strategy to serve the IoT most efficiently. For example, while the LTE-M technology, which is 7 times faster than standard LTE, is the type of technology suitable for supporting connected devices such as smart watches and utility meters, it is the NB-IoT technology that supports parking control, smart cities, industrial monitors, and smart agriculture. Mr. Johnston reported that 85% of global organizations are considering or exploring an IoT strategy and that benefits include smart homes, smart cities, resources efficiency, public safety and transportation improvements.

Agenda Item 7 – California Emerging Technology Fund Update (CETF)

Sunne Wright-McPeak, President and CEO of California Emerging Technology Fund, provided an update on behalf of CETF regarding AB 1665 by Assemblymembers Eduardo Garcia, Cecilia Aguiar-Curry, Holden and McCarty, and which has 10 other principal and co-authors. AB 1665 is the Internet for All Now Act of 2017.

Ms. Wright-McPeak introduced Darion Johnston from the Office of Assemblywoman Cecilia Aguiar-Curry to speak on the developments of the act. Ms. Johnston discussed that a broad coalition had formed to support the act, with weekly meetings taking place to coordinate on the advancement of the

bill. The bill is presently in the Assembly Communications and Conveyance Committee, where the committee's Chief Consultant is coordinating the process.

One objective of the Internet for All Now Act is to have the California Public Utilities Commission (CPUC), through the administration of the California Advanced Services Fund (CASF), approve funding for infrastructure projects that will provide broadband access to no less than 98% of California households. Because there is an interest in making the CASF more equitable, there is discussion as to whether the standard of 98% should apply per region, in an effort to improve adoption in low-income communities, non-primary-English-speaking households, among other populations that are less connected. A hearing date is to be set.

Agenda Item 8 – Public Comment

Michael Morris, CPUC

Mr. Morris provided public comment on behalf of Robert Wullenjohn, Manager of the CASF program. A written statement was also provided. Additionally, a copy of the 2016 CASF Annual Report was shared with Members of the CBC. Mr. Morris highlighted the cost per grant funded household was \$1,644. He noted that the state is 360,000 households short of reaching the 98% availability goal. However, when the goal is applied to each county, the number of households increases to about 424,000. These homes are largely located in rural areas. Wireline internet service is presently available to about 46% of rural households in California. Mr. Morris pointed to the gap analysis by county in the report. He also encouraged Members to download CalSPEED, which is a crowd-sourced internet speed testing application.